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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,527	10/23/2003	Takahiro Iwahama	3273-0182P	6374

2292 7590 07/26/2007
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EXAMINER

KEYS, ROSALYND ANN

ART UNIT	PAPER NUMBER
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1621

NOTIFICATION DATE	DELIVERY MODE
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07/26/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/690,527

Applicant(s)

IWAHAMA ET AL.

Examiner

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) 3, 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 9, 11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 10 and 12 is/are objected to.
- 8) ☒ Claim(s) 1 and 3-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1 and 3-13 are pending.
Claims 1, 7, 9, 11 and 13 are rejected.
Claims 4, 8, 10 and 12 are objected.
Claims 3, 5 and 6 are withdrawn.
Claim 2 is cancelled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 13, 2007 has been entered.

Election/Restrictions

3. Claims 3, 5 and 6 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 14, 2005.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharetts et al. (US 3,215,665).

Sharetts et al. teach the compound 2-hydroxy-4-vinyloxy benzophenone, which is equivalent to the compound 2-hydroxy-4-vinyloxyphenyl-phenyl ketone disclosed in claim 9 (entire disclosure, in particular column 4, lines 6 and 7).

6. Claims 7 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurisu et al. (JP 62056187).

Kurisu et al. disclose the compounds having the claimed formula (1a), in particular the compounds 4,4'-bis(vinyloxy)diphenyl sulfone and 1,1'-sulfonylbis[4-[(1-methylethenyl)oxy]-benzene (see column 1, page 472).

7. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Kanayama et al. (JP 05051418).

Kanayama et al. teach a compound having the claimed formula (1a), see entire disclosure, in particular Table 1.

8. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Hardy et al. (US 2,962,533).

Hardy teach a compound having the claimed formula (1a), wherein W is carbonyl, q is 1 and is OH, p is 2 wherein one p is a OH and the other is a vinox group (see column 3, lines 2-25). The benzene ring containing the q substituent is further substituted with an allyloxy group.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

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at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cinque et al. (J. Med. Chem., April 1998, Vol. 41, No. 9, pp. 1540-1554).

Cinque et al. disclose compound 48 (see page 1543) which is structurally similar to the claimed compound, wherein W is a sulfur atom, r is 1, q is 0, m is 0, p is 1. The difference between the compound of Cinque et al. and the instant compound is that in the instant compound R is a vinyloxy group, whereas in Cinque et al. it is an allyloxy group. However, Cinque teaches that one can modify their compounds for example by replacing the oxygen with a sulfur group or the allyloxy group with its isomer vinyl ether (see for instance page 1543). Thus, Cinque et al. provide motivation to modify their compounds in order to optimize the biological activity of said compounds.

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13. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanayama et al. (JP 05051418).

Kanayama et al. disclose the compound bis [4-(1-propenyloxy)phenyl]-methanone, which differs from the compound of claim 11 in the placement of the propenyloxy substituents on the ring. However, compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). Thus, one having ordinary skill in the art at the time the invention was made would have been motivated to modify the position of the propenyloxy substituents on the ring of the compound taught by Kanayama et al. in a search for new components useful for the manufacture of resin compositions for sealing semiconductors.

14. Claim 7 is rejected under 35 U.S.C. 103(a) being unpatentable over Hardy et al. (US 2,962,533).

Hardy et al. teach o-hydroxybenzophenones which are suggestive of the compounds having the claimed formula (1a). The compounds of Hardy et al. are useful as ultraviolet absorbers (see entire disclosure, in particular column 1, lines 14-25 and column 2, line 58 to column 3, line 28). The compound disclosed by Hardy et al. is suggestive of the claimed compound having the claimed formula (1a), wherein W is a carbonyl group; p is 2; q is 2; one pR is a hydrogen and the other pR is an alkenyloxy group, and one qR is a hydrogen and the other qR is an alkenyloxy group (see entire disclosure, in particular column 1, lines 14-25). The compounds of Hardy et al. are structurally similar to the compounds having the claimed formula (1a). One having ordinary skill in the art would have been motivated to make the instant compounds because compounds of similar structure are expected to have similar properties. See MPEP 2144.08, specifically the section that states: "If such a species or subgenus is

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structurally similar to that claimed, its disclosure may motivate one of ordinary skill in the art to choose the claimed species or subgenus from the genus, based on the reasonable expectation that structurally similar species usually have similar properties. See, e.g., *Dillon*, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also *Devel*, 51 F.3d at 1558, 34 USPQ2d at 1214 ("Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties."). The utility of such properties will normally provide some motivation to make the claimed species or subgenus."

Response to Amendment

15. The rejection of claim 7 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over *Minami et al.* (EP 0 466 096 A1) is withdrawn due to the amendment to claim 7, filed June 15, 2007 which discloses that when p is 1 and W is a sulfonyl group, both of R and R' are groups represented by Formula (3).

Response to Arguments

16. Applicant's arguments, see page 8, paragraph 3, filed June 15, 2007, with respect to the rejection of claim 1 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over *Hardy et al.* (US 2,962,533) have been fully considered and are persuasive. The rejection of claim 1 has been withdrawn.

17. Applicant's arguments, see page 9, paragraph 2, filed June 15, 2007, with respect to the rejection of claim 1 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35

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U.S.C. 103(a) as obvious over Minami et al. (EP 0 466 096 A1) have been fully considered and are persuasive. The rejection of claim 1 has been withdrawn.

18. Applicant's arguments filed June 15, 2007, with respect to the rejection of claim 7 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hardy et al. (US 2,962,533) have been fully considered but they are not persuasive. The proviso at the end of claim 7 does not disclose that when W is a carbonyl group and at least one of the two aromatic rings does not have a hydroxyl group, and instead has a vinyloxy group. What it discloses is that when q is 1 and when p is 1 and W is a carbonyl group, at least one of R and R' is a group represented by Formula (3). The claim as amended is still anticipated by or obvious over Hardy et al. Thus, these rejections are maintained.

Allowable Subject Matter

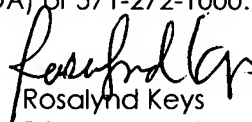
19. Claims 4, 8, 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, W & F 5:30-7:30 am & 1-5 pm; T & Th 5:30 am-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eyler Yvonne can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Rosalyn Keys
Primary Examiner
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July 22, 2007